

Farming and Wildlife

Series No. 3



Ring-necked Pheasant



Missouri Department of Conservation

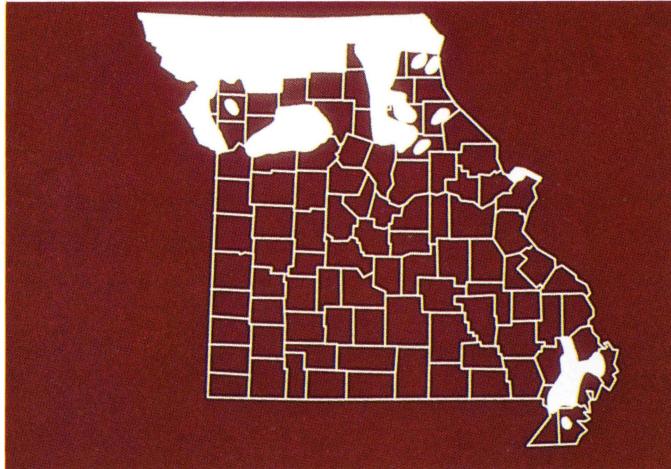


U.S.D.A. Soil Conservation Service

Agriculture is an important industry in Missouri. About one-third of the state is devoted to crop production and another one-third produces livestock and forage. Farm management has a big impact on ring-necked pheasant habitat because so much of the state is devoted to crop and forage production. Farming practices can be compatible with wildlife habitat and soil conservation. But, understanding how farming affects pheasant habitat

is necessary before habitat can be improved. The following pictures illustrate different cropping and forage practices and how ring-necked pheasant habitat is positively or negatively impacted. As you review the photographs, think of your own farm conditions and compare them to the pictures. You can see how your farming system is affecting ringneck habitat.

Pheasant Range



The pheasant is primarily found in the northern one-third of the state and the range is expanding slowly south. There are also birds in several southeastern counties and one central Missouri county, the result of a range expansion program in the 1950s.

Pheasant Habitat



Pheasant habitat is tied to grain crops, especially corn. Ringnecks do best where agricultural crops are the dominant land use but there is still some grassland for nesting and woodland for winter cover.

Tillage Practices



Pheasants eat waste grain, especially corn, during the winter. Conservation tillage involves reduced cultivation. Soil is protected from erosion and pheasants feed on the waste grain. Milo and corn crop residues also can provide winter cover.



Fall plowing or heavy discing eliminates food sources plus it exposes the soil to erosion.

Stripcropping



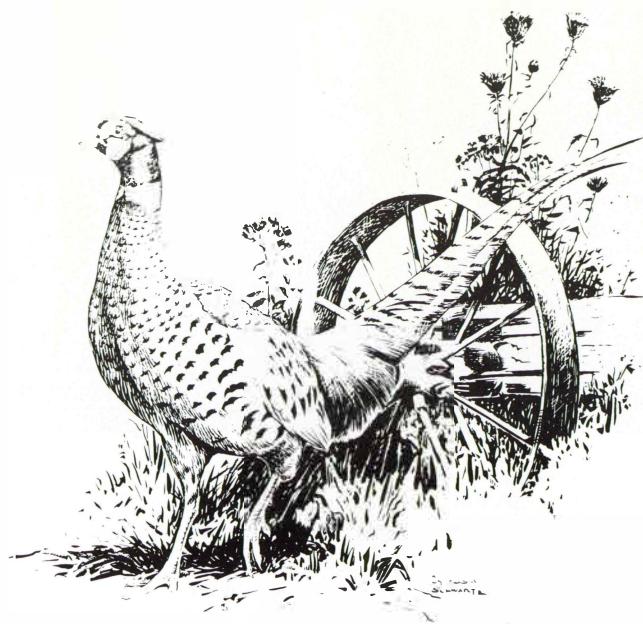
Stripcropping involves growing crops in a systematic arrangement of strips or bands on the field contour to reduce erosion. Alternating strips of row crops such as corn or soybeans with wheat, legumes or grass results in nesting and brood rearing habitat next to a food source.



Ringnecks can find good nesting habitat in grass contour strips if mowing is delayed until July 1 but occurs before August 1. Mowing after August will not allow sufficient regrowth for 8 inches of cover necessary for nesting the following April. Native grass contour strips make the best pheasant cover. These strips can be harvested for hay or seed.



Planting crops up and down slopes results in erosion. Pheasant nesting habitat and food sources are more diverse on farms where stripcropping is a standard management practice.



Charles W. Schwartz

Crop Rotation



Alternating crops in the same field builds soil fertility and reduces erosion. Incorporating small grains or legumes such as red clover improves pheasant habitat diversity. Pheasants are attracted to fields containing legumes to nest and raise their young.



Planting row crops year after year can deplete the soil and contribute to erosion. Pheasant food and cover are more diverse on farms using a crop rotation system.

Terraces



Terraces control erosion by shortening slope length and reducing water velocity. Terraces with grassed slopes are used by pheasants for nesting. Terrace slopes with native grass can also provide winter cover.



Broad-based earthen terraces without grassy slopes can check soil erosion but do not provide habitat benefits to ringnecks.

Grass Types



Timothy, orchardgrass or bromegrass are good forages that also make excellent pheasant habitat. These cool-season grasses do not form dense sods that restrict pheasant movement. Legumes can be added to these grasses to improve forage quality and pheasant food sources.



Pastures and hayfields of pure fescue produce poor pheasant habitat. These fields usually have poor cover and food for young birds.



Native grasses produce high quality summer forage in July and August. These grasses make good spring pheasant nesting cover. Native grasses are also desirable winter cover but over winter grass height should be 8 to 10 inches.



Forage Utilization



Pheasants nest on the ground in grasses. Nesting begins in mid-April with most chicks hatching by mid-June. Cool-season grass hayfields and pastures such as fescue, timothy, bromegrass and orchardgrass should have 3 to 6 inches of grass height over winter. Warm-season grasses such as switchgrass, Indiangrass and big bluestem should have at least 8 to 10 inches of grass height over winter. This grass height will ensure optimum forage the following spring and provide winter and nesting cover for pheasants.



Heavily used pastures and hayfields are rarely used by ringnecks, especially during the winter. These fields provide little cover or food for pheasants and forage production may be low. Erosion can also be a problem on over-grazed fields.

Legume Management



Establishing and managing legumes such as red clover, ladino clover or lespedeza make pastures more attractive to pheasants for nesting and raising young.



Hayfields and pastures without legumes have less food value for both pheasants and livestock.

Pasture Rotation



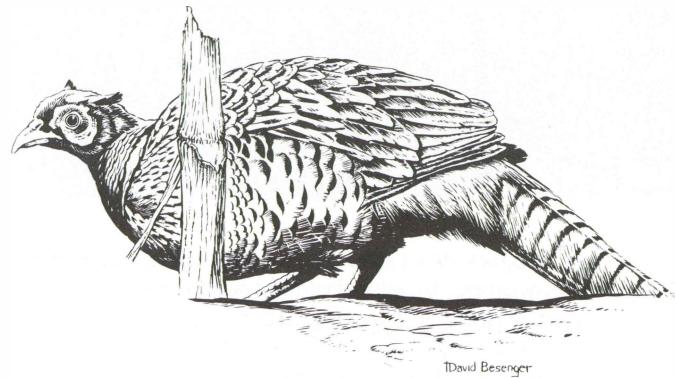
Pasture rotation involves moving livestock between pasture units to rest the grasses and allow for regrowth. Grazing pressure should be adjusted to keep height for fescue, timothy, bromegrass or orchardgrass about 3 to 6 inches over winter.



Pasture rotation systems can be even more effective for livestock production and pheasant nesting with the addition of warm-season grasses. Livestock can be moved into warm-season pastures when cool-season grasses stop growing during the summer. Big bluestem, switchgrass and Indiangrass are warm-season grasses that make good pheasant nesting and winter cover.



Year-round grazing can produce grass that is too short for spring pheasant nesting. Forage yields are also reduced.



Waterways



Grass waterways are designed to carry water down slopes without creating a gully. Waterways of switchgrass make attractive pheasant nesting and winter cover sites. These waterways can be hayed during the first 2 weeks of July or cut for seed.



Mowing waterways before July 1 or after August 1 destroys pheasant nesting and brood rearing habitat. Pheasants need at least 8 inches of grass height by mid-April to conceal nests. If waterways must be mowed after August 1, mowing height should be at least 8 inches to provide enough grass cover for nesting in the spring.

Field Borders



Field borders are especially important to pheasants during the winter. Brushy field borders provide cover from winter storms. Grassy or weedy field borders are used for nesting and raising young. Borders should be maintained between fields and around wood lots. Leaving an unmowed border around hayfields will improve pheasant nesting habitat.



Woody field borders must be protected from grazing. If you can see through a woody field border during the summer, it probably will not provide adequate winter cover for pheasants. Retaining fencerows adjacent to crop fields is important to pheasants. Winter cover must be next to cropfields that pheasants use for feeding. Root plows can be used to trim roots of hedgerow trees to prevent moisture stress to adjacent crops.

Idle Areas



Pheasants are a tough bird but still need winter cover. Fenced ponds, abandoned building sites and marshes can support pheasants over the winter even if these sites are only 1 to 2 acres in size. Native grasses adjacent to ponds are used for nesting and winter cover.



Grazed ponds are not used by pheasants for winter cover or nesting. These ponds may also have a shortened life because of erosion.

Land Use Patterns and Pheasant Habitat



Ring-necked pheasant habitat is tied to grain crops especially corn. Ringnecks do best where land-use is primarily cropland. Cropland can comprise up to 70 percent of the land-use with the other 30 percent as grassland and wood lots. Areas of extensive row crop with little grassland or woody cover cannot support pheasants. There is too little nesting and winter cover.



Pheasants are not found where the major land use is woodland or grassland. Regions with more than 40 percent woodland can be marginal for pheasants.



Cropland habitat for feeding, grassland habitat for nesting and woody draws for winter cover should all be within $\frac{1}{4}$ mile of each other for the best pheasant habitat conditions.



Habitat consisting of many small crop and grass fields interspersed around wood lots and woody draws makes better quail habitat than pheasant habitat.

You can determine how your farm rates as ring-necked pheasant habitat by answering the following questions yes or no. Refer to the pictures if you are unsure how to answer a question.

Yes No

Do most of your fields have grassy or woody borders? _____

Do you use some kind of conservation tillage system leaving crop residues over winter? _____

Do you have grass waterways that are unmowed until July? _____

Do you stripcrop sloping land? _____

Do you rotate your cattle among pastures? _____

Is the grass height in your cool-season pastures 3 to 6 inches tall at the end of winter? _____

Do you have several kinds of cool-season grasses such as bromegrass, orchardgrass or timothy in your pastures and hayfields? _____

Do you have any warm-season grass pastures or hayfields on your farm? _____

Do you hay all your fields before July? _____

Do you leave an unmowed border around some hayfields? _____

Do you have any idle areas such as fenced ponds or abandoned building sites? _____

Do you have some woody draws or hedges rows in crop fields or grass fields that are protected from grazing? _____

Is your farm mostly cropland? _____

Do you have crop fields, grass fields and woody areas all located within $\frac{1}{4}$ mile of each other? _____

If you have answered yes to 10 or more of these questions then your farm may be good to excellent habitat for pheasants. If you answered six or less questions yes, your farm may not have any pheasants or you may see pheasants only occasionally. Farming and wildlife habitat can be compatible. Farms with cropfields, pastures, hayfields and wood lots support more pheasants and maintain those birds during tougher winters than farms composed mostly of grassland or woodland.

The Department of Conservation will provide help to Missouri landowners on wildlife habitat management. There are 12 wildlife services biologists located throughout the state who will visit your land and assist you with management plans for pheasants and other wildlife. You can also contact your local conservation agent for assistance.

For more information on farm practices that will benefit pheasants and protect the soil, contact the U.S.D.A. Soil Conservation Service office in your county. Ask for a conservation farm plan so that you can have a complete assessment of your soil, wildlife and forest resources. You can even ask for a detailed appraisal of ring-necked pheasant habitat on your farm. Both the Soil Conservation Service and Missouri Department of Conservation will assist you in making your farm good habitat for pheasants.